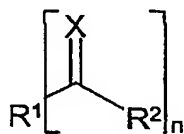


## Patent Claims:

1. Electronic device comprising cathode, anode and at least one organic layer, characterised in that the organic layer comprises at least one compound of the formula (1)



Formula (1)

where the following applies to the symbols used:

X is on each occurrence, identically or differently, O, S, Se, Te or NR;

R is on each occurrence, identically or differently, an organic radical having 1 to 22 carbon atoms, which may also be bonded to X via an O or N atom, or OH or NH<sub>2</sub>;

R<sup>1</sup>, R<sup>2</sup> is on each occurrence, identically or differently, an aromatic or hetero-aromatic ring system having 1 to 40 aromatic C atoms, which may be substituted by one or more radicals R<sup>3</sup>, where the substituents R<sup>1</sup> and R<sup>2</sup> may form a mono- or polycyclic ring system with one another;

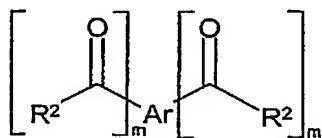
R<sup>3</sup> is on each occurrence, identically or differently, H, OH, N(R<sup>4</sup>)<sub>2</sub>, CN, B(R<sup>4</sup>)<sub>2</sub>, Si(R<sup>4</sup>)<sub>3</sub>, a straight-chain, branched or cyclic alkyl or alkoxy chain having 1 to 22 C atoms, in which, in addition, one or more non-adjacent C atoms may be replaced by -R<sup>4</sup>C=CR<sup>4</sup>-, -C≡C-, Si(R<sup>4</sup>)<sub>2</sub>, Ge(R<sup>4</sup>)<sub>2</sub>, Sn(R<sup>4</sup>)<sub>2</sub>, -NR<sup>4</sup>-, -O-, -S-, -CO-, -CO-O- or -O-CO-O- and where one or more H atoms may be replaced by fluorine, or an aryl, heteroaryl or aryloxy group having 1 to 40 C atoms, which may also be substituted by one or more radicals R<sup>4</sup>, or a combination of 2, 3 or 4 of these systems; two or more substituents R<sup>3</sup> here may also form a ring system with one another;

R<sup>4</sup> is on each occurrence, identically or differently, H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 C atoms;

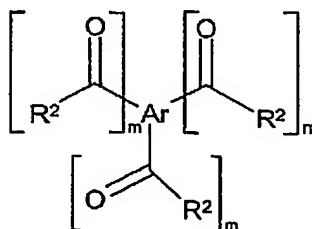
n is on each occurrence 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10;

with the proviso that the compound of the formula (1) has a molecular weight of ≥ 150 g/mol and ≤ 10,000 g/mol and that the device does not comprise a phosphorescent emitter; and furthermore with the proviso that neither R<sup>1</sup> nor R<sup>2</sup> represents a substituted or unsubstituted spirobifluorene, characterised in that the absorption edge of the compound of the formula (1) is < 400 nm.

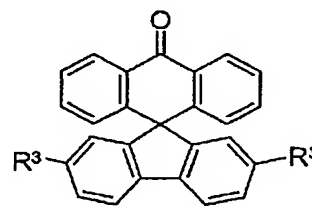
2. Organic electronic device according to Claim 1, characterised in that the absorption edge of the compound of the formula (1) is  $< 380$  nm.
3. Organic electronic devices according to Claim 1 and/or 2, characterised in that they are organic electroluminescent devices, organic thin-film transistors, organic field-effect transistors, organic solar cells, organic photoreceptors or organic lasers.
4. Organic electronic device according to one or more of Claims 1 to 3, characterised in that the compound of the formula (1) is amorphous and the glass transition temperature  $T_g$  of the compound is greater than  $80^\circ\text{C}$ .
5. Organic electronic device according to one or more of Claims 1 to 4, characterised in that X stands for O.
6. Organic electronic device according to one or more of Claims 1 to 5, characterised in that the compound of the formula (1) contains more than one carbonyl group.
7. Organic electronic device according to Claim 6, characterised in that the carbonyl functions have a linear, branched or dendritic arrangement.
8. Organic electronic device according to one or more of Claims 1 to 7, characterised in that the compound of the formula (1) is selected from the compounds of the formula (2) to formula (4)



Formula (2)



Formula (3)



Formula (4)

where  $R^2$  and  $R^3$  have the same meaning as described in Claim 1, and the following applies to the other symbols and indices used:

Ar is on each occurrence, identically or differently, a divalent (in formula (2)) or trivalent (in formula (3)) aromatic or heteroaromatic ring system having 3 to 24 aromatic C atoms, which may be substituted by one or more radicals  $R^3$ ;

m is on each occurrence, identically or differently, 1, 2 or 3.

9. Organic electronic device according to one or more of Claims 1 to 8, characterised in that the compound of the formula (1) is selected from the example structures 1 to 28.
10. Organic electronic device according to one or more of Claims 1 to 9, characterised in that the compound of the formula (1) is employed as electron-transport material in an electron-transport layer or in an emission layer.
11. Organic electronic device according to Claim 10, characterised in that the compound of the formula (1) is employed as electron-transport material in an electron-transport layer.
12. Organic electronic device according to one or more of Claims 1 to 11, characterised in that the layer comprising compound A consists of at least 50% of this compound.
13. Organic electronic device according to Claim 12, characterised in that the layer comprising compound of the formula (1) consists only of this compound as pure layer.
16. Organic electronic device according to one or more of Claims 1 to 15, characterised in that it is an organic electroluminescent device in which the emitter(s) fluoresce(s) in the visible spectral region with one or more maxima between 380 nm and 750 nm on suitable excitation.